

FIGURE 1A

CHIR 12.12 light chain:

leader:

MALPAQLLGLLMLWVSGSSG

variable:

DIVMTQSPSLSTVTPGEPASISCRSSQSLLYSNGNYLDWYLQKPGQSPQVLISLGSNRASGV
VPDRFSGSGSGTDFTLKISRVEAEDVGVYYCMQARQTPFTFGPGTKVDIR

constant:

RTVAAPSVFIFPPSDEQLKSGTASVVCLLNMFYPREAKVQWKVDNALQSGNSQESVTEQDSKD
DSTYSLSSSTLTLSKADYEKKVYACEVTHQGLSSPVTKSFNRGEC

FIGURE 1B

CHIR-12.12 heavy chain:

leader:

MEFGLSWVFLVAILRGVQC

variable:

QVQLVESGGVVQPGRLRLSCAASGFTFSSYGMHWVRQAPGKGLEWVAVISYEESENRYHAD
SVKGRFTISRDNSKITLYLQMNSLRTEDTAVYYCARDGGIAAPGPDYWGQGTLTVSS

constant:

ASTKGPSVFPLAPASKSTSGGTAAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPABLQSSGL
YSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPCPAPELLGGPSVF
LFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTPREEQYNSTYRVV
SVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPVYTLPPSREEMTKNQVSL
TCLVKGFYPSDIAVEWESNGQPENNYKTPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSV
MHEALHNHYTQKSLSLSPGK

alternative constant region:

ASTKGPSVFPLAPSSKSTSGGTAAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPABLQSSGL
YSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPCPAPELLGGPSVF
LFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTPREEQYNSTYRVV
SVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPVYTLPPSREEMTKNQVSL
TCLVKGFYPSDIAVEWESNGQPENNYKTPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSV
MHEALHNHYTQKSLSLSPGK

FIGURE 2A

DNA sequence of light chain of CHIR-12.12:

5'atggcgctccctgtcagctctgggctgtaatgctctgggtctggatccagtgggatattgtatgactcagtcgtccactctc
cctgaccgtcacccctggagagccggcctccatctcctgcaggccagtcagagccctctgtataatgatacaactattggatt
gtacactgcagaagccaggcaggtccacagggtctcatctttgggtctaattggccctccggggtccctgacaggcagttcgtggca
gtggatcaggcacagatttacactgaaaatcagcagatggaggctgaggatgtggggittattactgcattgcagtcgacaaact
ccattcacttgcggccctgggaccaaaagtggatcatcagacgaactgtggctgcaccatctgttcatcttccgcacatctgtgagcagt
tgaaaatcttgcactgcctgttgtgcctgtcataacttctatcccagagagggccaaagtacagtggaaagggtggataacgcctcc
aatcgggtaactcccaggagagtgcacagagcaggacagcaaggacagcacctacagccctcagcagcaccctgacgctgagcaa
agcagactacgagaaacacaaagtctacgcctgcgaagtcacccatcagggcctgagctgcggcgtcacaagagctcaacaggg
gagagtgttag3'

FIGURE 2B

DNA sequence of heavy chain of CHIR-12.12 (including introns):

5'atggagtttggctgagctgggtttccitgttgcatttaagagggtccagtgtcaggtgcagttggtgaggctggggaggcgt
ggtcacgcctgggaggtccctgagactctcctgtcagcctctggattcacccctcagtagctatggcatgcactgggtccgcaggcct
caggcaagggctggagtgggtggcagttatcatatgaggaagaatagataccatgcagactccgtgaagggccgattcacc
tctccagagacaattccaagatcacgcgtatctgc当地aaatgaacagccctcagaactgaggacacggctgttattactgtgcgagat
gggggtatagcagcacctggcctgactactgggcccaggaaacctggtcaccgtcctcagcaagtaccaaaggccccatccgt
cttccccctggcgccccctgtagcaagagcacccctggggcacagcggccctggctgcctggtaaggactacttccccgaaccgg
tgacgggtcgttggactcaggcgcctgaccagcggcgtgcacaccctcccgctgcctcagtcctcaggactactccctcag
cagcgtggtgaccgtgcctcccaggcagcttggcaccaggacacatctgc当地acgtgaatcacaagccaggcaacaccaagg
acaagagagttgtgagaggccaggcacaggaggaggagggtgtctgttggaaaggccaggctcagcgtcctgcctggacgc当地cc
gctatgc当地gtccctggcaggcaggcaggcaggccctgtgc当地cccttccacccggaggccttgc当地cccccactcatgc当地agg
gagagggtctctggctttcccccaggcttggcaggcaggcacaggctaggtaggtcccttaacccaggccctgc当地ccaaaagg
gcttgggctcagacctgccaagagccatattccggaggaccctgc当地ccctgacttaagccccc当地aaaagg
gccaactctccactccctcagattccctggcaggtaactccaaatctctctgc当地ccaaatctgtgacaaaactcacacatgc
ccaccgtcccccaggtaagccaggcccaggcctcgc当地ccctcaggctcaaggcgggacagggtcccttagagtgc当地ccatccagg
aggcccccaggccgggtgctgacacgtccaccctccatctctctcaggcaccctgacttccctgggggaccgtc当地tcccttccccc
aaaaccctaggacaccctcatgtctccggaccctggcaggtaactccaaatctgtgacaaaactcacacatgc
agttcaactggtagtggacggcgtggagggtc当地atgcaagacaaaaggccggggaggaggcactacaacacgc当地taccgt
ggc当地cgtccctcaccgtcctgc当地ccaggactggctgactggcaaggaggtaactgcaaggctccaaacaaaaggccccc
ccatcgagaaaaccatctccaaagccaaagggtggaccctgggggtgc当地ggggccacatggacagaggccggctggccccc
tctggccctgagagtgc当地ccctgttgc当地ccctacaggcaggccggaggcactacaccctgccccatcccg
gaggagatgaccaagaaccaggcaggctgactggctgactccaggc当地ccatccaggc当地ccatccaggc当地ccatcccg
tggcaggccggagaacaactacaagaccacgc当地ccctggactccggc当地ccatccaggc当地ccatccaggc当地ccatcccg
aagagcaggtagtggcaggggaaacgtctctcatgtccctgtgactggactccggc当地ccatccaggc当地ccatccaggc当地ccatcccg
ctgtctccgggtaaatatg3'

FIGURE 3A

CHIR-5.9 light chain:

leader:

MALLAQLLGLLMLWVPGSSG

variable:

AIVMTQPPPLSSPVTLGQPASISCRSSQSLVHSDGNTYLNWLQQRPGQPPRLLIYKFFRRLSG
VPDRFSGSGAGTDFTLKISRVEAEDVGVYYCMQVTQFPHTFGQGTRLEIK

constant:

RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSK
DSTYSLSSLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

FIGURE 3B

CHIR-5.9 heavy chain:

leader:

MGSTAILALLLAVLQGVCA

variable:

EVQLVQSGAEVKKPGEISLKISCKGSGYSFTSYWIGWVRQMPGKGLEWMGIYPGDSDTRYSP
SFQGQVTISADKSISTAYLQWSSLKASDTAMYCCARGTAAGRDIYYYYYGMDVWGQGTTVTVS
S

constant:

ASTKGPSVFPLAPASKSTSGGTAAALGCLVKDYFPEPVTVWSNSGALTSGVHTFPABLQSSGL
YSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPEELLGGPSVF
LFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVV
SVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPVYTLPPSREEMTKNQVSL
TCLVKGFYPSDIAVEWESNGQPENNYKTPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSV
MHEALHNHYTQKSLSLSPGK

alternative constant region:

ASTKGPSVFPLAPSSKSTSGGTAAALGCLVKDYFPEPVTVWSNSGALTSGVHTFPABLQSSGL
YSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPEELLGGPSVF
LFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVV
SVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPVYTLPPSREEMTKNQVSL
TCLVKGFYPSDIAVEWESNGQPENNYKTPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSV
MHEALHNHYTQKSLSLSPGK

FIGURE 4A

Coding sequence for short isoform of human CD40:

```
1 atggttcgtc tgcccttgca gtgcgtcctc tggggctgct tgctgaccgc tggccatcca  
61 gaaccaccca ctgcattgcag agaaaaaacag tacctaataa acagttagtgc ctgttcttg  
121 tgccagccag gacagaaact ggtgaggatgc tgcacagagt tcactgaaac ggaatgcctt  
181 ccttgcggtg aaagcgaatt cctagacacc tggAACAGAG agacacactg ccaccagcac  
241 aaatactgctgac accccaacctt agggcttcgg gtccagcaga agggcacctc agaaacagac  
301 accatctgca cctgtgaaga aggctggcac tgcacgatgtt aggcctgtga gagctgtgtc  
361 ctgcaccgct catgctcgcc cggcttggg gtcaaggcaga ttgttacagg ggtttctgtat  
421 accatctgctgac agccctgccc agtcggcttc ttctccaatgt tgcacatctgc ttccggaaaa  
481 tgtcaccctt ggacaaggc cccaggatcg gctgagagcc ctgggtgtga tccccatcat  
541 ctgcggatc ctgttgcctt cccttgggt gctggctttt atcaaaaagg tggccaagaa  
601 gccaaccaat aa
```

FIGURE 4B

Encoded short isoform of human CD40:

```
1 mvrlplqcyl wgclltavhp epptacrekq ylinsqccsl cqpgqklvsd cteftetec  
61 pcgesefldt wnrethchqh kycdpnlglr vqqkgtsetd tictceegwh ctseacescv  
121 lhrscspgfsg vkqiatgvsd ticepcpvfg fsnvssafeek chpwtrspgs aespaggdphh  
181 lrdpvchplg aglyqkggqe anq
```

FIGURE 4C

Coding sequence for long isoform of human CD40:

```
1 atggtcgtc tgccctgcga gtgcgtcctc tggggctgct tgctgaccgc tgtccatcca
61 gaaccaccca ctgcatgcag agaaaaacag tacctaataa acagtcaactg ctgttctttg
121 tgccagccag gacagaaaact ggtgagtgcac tgccacagact tcactgaaac ggaatgcctt
181 ccttgcggtg aaagcgaatt cctagacacc tggaacacagag agacacacactg ccaccagcac
241 aaatactgcg accccaacctt agggcttcgg gtccagcaga agggcacctc agaaacagac
301 accatctgca cctgtgaaga aggctggcac tgtagtgcagg aggctgtga gagctgtgc
361 ctgcaccgct catgctcgcc cggcttggg gtcaagcaga ttgtacagg gggttctgat
421 accatctgcg agccctgccc agtcggcttc ttctccaaatg tgcatactgc tttcgaaaaaa
481 tgcaccctt ggacaagctg tgagacaaaaa gacctgggt tgcaacacaggc aggccacaaac
541 aagactgatg ttgtctgtgg tccccaggat cggctgagag ccctgggtt gatccccatc
601 atcttcggga tcctgtttgc catcctcttgc tgctggctt ttatcaaaaaa ggfggccaag
661 aagccaacca ataaggcccccc ccaccccaag caggaacccc aggagatcaa ttcccac
721 gatctccctg gctccaaacac tgctgctcca gtgcaggaga ctttacatgg atgccaaccg
781 gtcacccagg aggatggcaa agagatgcg atctcagtgc aggagagaca gtga
```

FIGURE 4D

Encoded long isoform of human CD40:

```
1 mvrlplqcylwgclltavhp epptacrekq ylinsqccsl cqpgqklvsd cteftetec
61 pcgesefldt wnrighthqh kycdpnlgir vqqkgtsetd tictceegwh ctseacescv
121 lhrscspgf vkkqiatgvsd ticepcpvf fsnvssafeck chpwtscetk dlvvqqagtn
181 ktdvvvcgpqd rlralvvipi ifgilfaill vlvfikkvak kptnkaphpk qepqeinfpd
241 dlpgsntaap vqetlhgcqp vtqedgkesr isvqerq
```

FIGURE 5